

Title (en)

ASPHALT COMPOSITIONS FOR ROOFING APPLICATIONS, METHODS FOR MAKING THE SAME, AND FILLED ASPHALT MATERIAL COMPRISING THE SAME

Title (de)

ASPHALTZUSAMMENSETZUNGEN FÜR BEDACHUNGSANWENDUNGEN, VERFAHREN ZUR HERSTELLUNG DAVON UND GEFÜLLTES ASPHALTMATERIAL DAMIT

Title (fr)

COMPOSITIONS D'ASPHALTE POUR APPLICATIONS DE TOITURE, LEURS PROCÉDÉS DE PRÉPARATION, ET MATÉRIAU D'ASPHALTE ADDITIONNÉ D'UNE CHARGE LES COMPRENANT

Publication

EP 3169732 B1 20210922 (EN)

Application

EP 15821466 A 20150710

Priority

- US 201462025395 P 20140716
- US 201514794263 A 20150708
- US 2015039853 W 20150710

Abstract (en)

[origin: US2016017148A1] Asphalt compositions for roofing applications are provided, as well as filled asphalt material comprising the asphalt compositions and methods for making asphalt compositions and filled asphalt material. More particularly, the asphalt compositions comprise non-oxidized base asphalt; and a low molecular weight polyolefin present in an amount of from about 0.5 to about 15 wt % based on the total weight of the asphalt composition. The asphalt composition has a softening point from about 87.8 to about 160° C. (about 190 to about 320° F.), a penetration of greater than 12 deci-millimeters @ 25° C., as well as improved stain resistance and heat resistance.

IPC 8 full level

C08L 9/06 (2006.01); **C08L 23/00** (2006.01); **C08L 23/02** (2006.01); **C08L 53/02** (2006.01); **C08L 91/06** (2006.01); **C08L 95/00** (2006.01); **D06N 5/00** (2006.01)

CPC (source: EP KR US)

C04B 24/2611 (2013.01 - KR); **C04B 26/26** (2013.01 - KR); **C08L 91/06** (2013.01 - EP US); **C08L 95/00** (2013.01 - EP US); **D06N 5/003** (2013.01 - EP US); **C04B 2111/00586** (2013.01 - KR); **C08L 23/02** (2013.01 - EP US); **C08L 53/02** (2013.01 - EP US); **C08L 2555/86** (2013.01 - EP US)

Citation (opposition)

Opponent : Sasol Germany GmbH

- WO 2008101809 A1 20080828 - TOTAL FRANCE [FR], et al
- US 2003002920 A1 20030102 - HILDEBRAND GUNTER [DE], et al
- US 2014069297 A1 20140313 - ROTZ STEVEN L [US], et al
- WO 9709385 A1 19970313 - EXXON CHEMICAL PATENTS INC [US], et al
- EP 2287256 B1 20120613 - ENI SPA [IT]
- US 6384112 B1 20020507 - BOUSSAD NADJIB [FR]
- DE 19952846 B4 20050818 - MARZOUKI TAIEB [DE], et al
- US 2011197785 A1 20110818 - TRUMBORE DAVID C [US], et al
- WO 2009006241 A1 20090108 - OWENS CORNING INTELLECTUAL CAP [US], et al
- US 6972047 B2 20051206 - BUTLER JAMES R [US], et al
- KLAUS-WERNER DAMM ET AL.: "Asphalt Flow Improvers As 'Intelligent Fillers', For Hot Asphalts - A New Chapter in Asphalt Technology", JOURNAL OF APPLIED ASPHALT BINDER TECHNOLOGY, vol. 2, no. 1, April 2002 (2002-04-01), pages 36 - 69, XP055547206
- DONGWEI CAO ET AL.: "Evaluation of the Long-term Properties of Sasobit Modified As-phalt", INT. J. PAVEMENT RES. TECHNOL., vol. 4, no. 6, 2011, pages 384 - 391, XP055064418
- LI DAWEI, ET AL.: "Effect of Crystallinity of Polyethylene with Different Densities on Breakdown Strength and Conductance Property", MATERIALS, vol. 12, 1 January 2019 (2019-01-01), pages 1 - 13, XP055938390
- GRAHAM C. HURLEY ET AL.: "Evaluation of Sasobit® for Use in Warm Mix Asphalt", NCAT REPORT, 5 June 2005 (2005-06-05), XP055547202
- PROWELL BRIAN D: "Warm Mix Asphalt", THE INTERNATIONAL TECHNOLOGY SCANNING PROGRAM SUMMARY REPORT, 11 July 2007 (2007-07-11), pages 1 - 17, XP055938393
- JEREMIC DUSAN: "Polyethylene", ULLMANN'S ENCYCLOPEDIA OF INDUSTRIAL CHEMISTRY, WILEY-VCH VERLAG GMBH, 1 January 2014 (2014-01-01), pages 7 - 7, XP055938397
- G. V. WEBBER: "Wax Characterisation by Instrumental Analysis", DISSERTATIONS / PHD THESES, December 2000 (2000-12-01), pages 1, 40, XP055523811, Retrieved from the Internet <URL:http://scholar.sun.ac.za/handle/10019.1/52055?show=full>

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

US 2016017148 A1 20160121; **US 9605152 B2 20170328**; CN 106574123 A 20170419; EP 3169732 A1 20170524; EP 3169732 A4 20180328; EP 3169732 B1 20210922; ES 2893607 T3 20220209; JP 2017526761 A 20170914; JP 6643264 B2 20200212; KR 102417462 B1 20220706; KR 20170031670 A 20170321; MX 2016016980 A 20170503; PL 3169732 T3 20220124; WO 2016010837 A1 20160121

DOCDB simple family (application)

US 201514794263 A 20150708; CN 201580035576 A 20150710; EP 15821466 A 20150710; ES 15821466 T 20150710; JP 2016575163 A 20150710; KR 20167036811 A 20150710; MX 2016016980 A 20150710; PL 15821466 T 20150710; US 2015039853 W 20150710